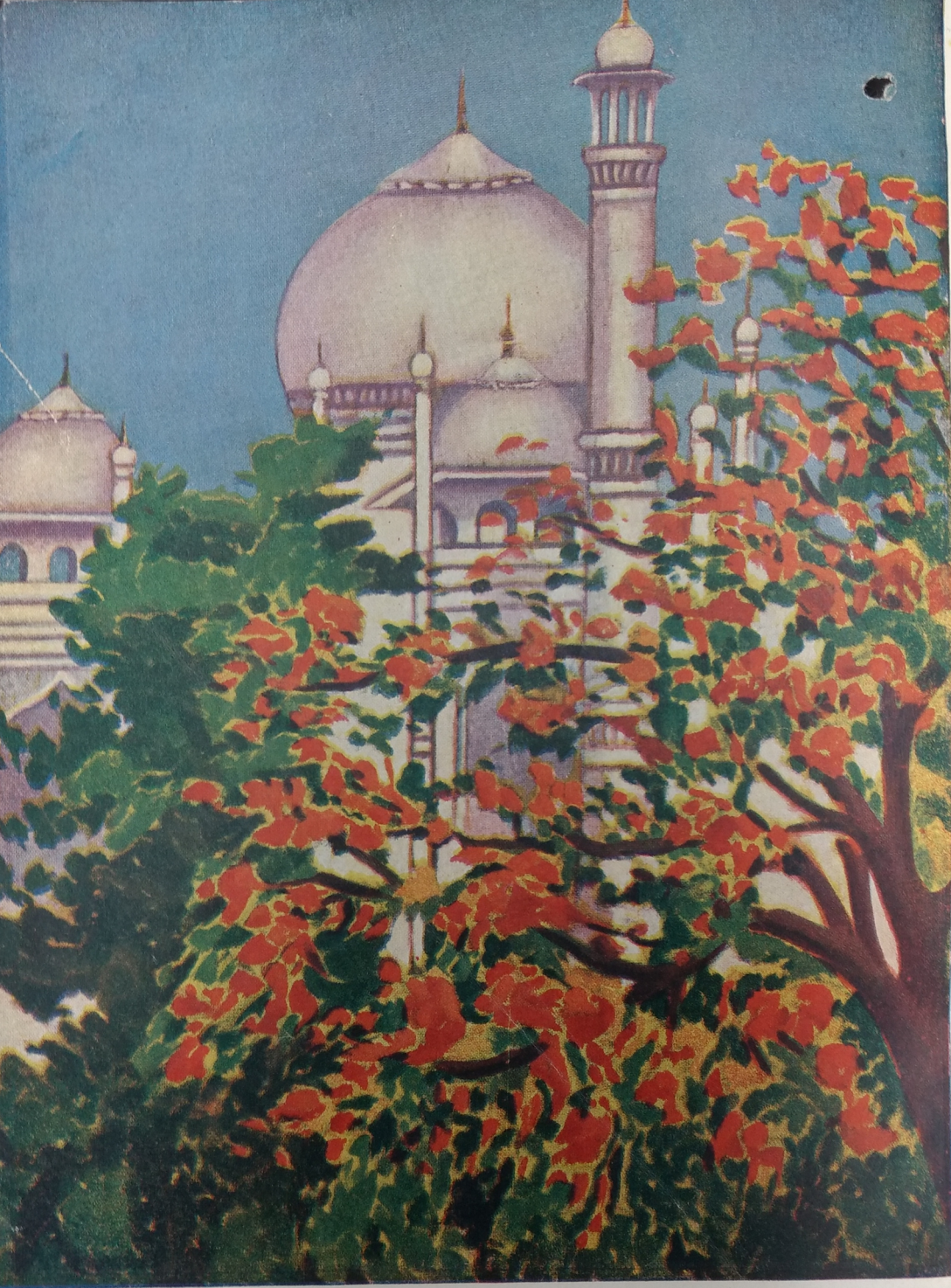




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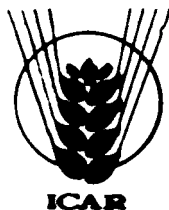
BEAUTIFYING CITIES OF INDIA



Glamour of the *Gul Mohar*

BEAUTIFYING CITIES OF INDIA

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PUBLISHED BY
INDIAN COUNCIL OF AGRICULTURAL RESEARCH
NEW DELHI

Printed January, 1961

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BEAUTIFYING CITIES OF INDIA

WHILE national plans are under way for increasing the agricultural and industrial wealth of the country, we should not ignore the problem of improving the look of our towns and cities. We should have a systematic programme of beautifying our urban areas by planned planting of ornamental trees. The problem may look gigantic, yet it is simple if this idea is taken up in right earnest by the Administrators, Municipal Corporations, Municipal Committees, Boards and other civic bodies in every town in the country.

For the healthy and balanced development of a nation, wealth in the form of material goods and plenty of food are no doubt necessary, but a beautiful environment is just as essential. Colourful trees and flowers play an important role in making our cities and towns beautiful. They refine the minds of the inhabitants and also provide shade and shelter.

Most of the social conditions and tensions which develop in slums of congested cities are due to the fact that man is isolated from his natural environment. Vegetation and sun are the ancient influences which have fashioned our body and spirit. Our towns have snatched men from essential conditions of living—sun, space, and verdure. Unless the conditions of nature are established in man's life, he cannot be healthy in body and spirit. Hence, it is necessary that people in towns are brought in touch with nature by development of parks and avenues.

BIO-AESTHETIC PLANNING

We are indebted to Professor Lancelot Hogben for the term "bio-aesthetic planning which may be defined as conscious planning of the flora and fauna with the object of beautifying the country.

Bio-aesthetic planning embraces both the animal and plant sciences, botany and zoology, and may be further defined as planned ecology of living beings from the artistic and aesthetic points of view. It includes the planting of ornamental flowering trees along city roads, in parks, public places and compounds of houses both in towns and villages, and development of national parks for the preservation of beautiful, non-carnivorous animals, and the creation of bird sanctuaries. The object of a bio-aesthetic plan for India is the encouragement of the planting of selected ornamental flowering trees in our towns and villages, protection of beautiful, harmless birds like wild ducks, egrets, geese and sarus cranes by legal declaration of our big

jhils as bird sanctuaries, and preservation of graceful animals such as black bucks, blue bulls, *sambhars* and spotted deer—which are being ruthlessly exterminated—in national parks and zoological gardens in the vicinity of our big towns.

Bio-aesthetic planning, of course, embraces landscape gardening as well, but it is a much wider term. The whole country is susceptible of bio-aesthetic planning, provided a consistent policy is followed and a persistent effort made over a long period. The bio-aesthetic planner is a master artist whose canvas is the entire country and whose pigments are the beautiful flowering trees. He paints the canvas of the countryside in rich colours—blue, yellow, orange, scarlet, red and pink. With the blue jacarandas, yellow *amaltas*, orange-scarlet *gul-mohurs*, scarlet *colvilleas*, red *erythras* and pink *lagerstroemias*, he paints the side-walks of roads, the platforms of railway stations, the canal banks and the compounds of houses and public buildings. His objective is to lay them out in a pleasing pattern so that an attractive picture results.

With the success of our two Five Year Plans, people in India have become plan-conscious ; in fact, planning has become the rage of our epoch. All thinking people realize the danger and wastefulness of a “go-as-you-please” and “devil-take-the-hindmost” competitive, un-planned economy. The world over, people have begun thinking of the future needs of the community and have realized the value of planning. The idea of planning appeals to the imagination of people who appreciate clear thinking, for it is scientific. It is also the quickest method of developing the resources of a backward country, and hence its appeal to the people of India. The idea of planning is not novel to the biologist who deals with the classification of plants and animals and their orderly arrangement in phyla, classes, families, genera and species, thus creating order out of chaos. In fact, Carl Linnaeus was a very great planner indeed, for he cleared so much confusion and created an orderly Biology.

Bio-aesthetic planning is the projection of the systematizing and planning mentality of the biologist into the field of everyday life. The planning of our cultural and aesthetic life is a necessary concomitant of the planning of our social and economic life. While we are planning our industries and agriculture we can hardly ignore the environment of human beings.

Though a beautiful pattern may result by chance out of haphazard efforts of individuals, it cannot be called planning for beauty. Planning has been described by Professor Abercrombie as “a conscious exercise of the powers of combination and design, and not a question of unconfined growth, even though the latter may produce fortuitously

happy results".

About 150 years ago in Europe and about 50 years ago in this country, the common man was afraid of the wild country, mountains, lakes and forests, and regarded mountains, and forests with horror. It is only in the nineteenth century that educated people began to admire the beauty of the mountains and forests. Since then the pendulum has swung to the other extreme. There is in some of us an indiscriminating and irrational adoration of nature. People who have never grown a herbaceous border of annual flowers in their own house, burst out into panegyrics on seeing a clump of anemones or potentillas in the hills. It is far from my intention to decry the beauty of alpine flowers in the Himalayan meadows as compared with the annual flowering plants in our gardens in the plains. On the other hand, I hold that in the magnificent setting of the Himalayan snows a planned alpine garden will look much better than anything nature has ever produced.

TAMING NATURE

Untamed nature is disorderly, chaotic and wayward. Man has been constantly fighting his environment. He battles with nature to produce a semblance of order. He clears the jungles, breaks virgin soil for cultivation, diverts the courses of rivers, makes canals and embankments for irrigation and converts waste land into parks and gardens. While in some cases he has produced ugliness by his haphazard, uncontrolled and misdirected actions, in other cases he has been able to improve upon nature. Who can deny the beauty of the poplar-lined roads of France, the vineyards of the Rhine, the tulip fields of Holland, the saffron terraces of Kashmir and the hedgerows of the English countryside? Those who admire the beauty of the English countryside forget that it is the result of hard work of many generations. Describing the evolution of the English countryside, Lancelot Hogben writes: "What generally gains admiration for the beauties of the English countryside is not nature as such. Untouched nature is generally monotonous. English park lands and hedgerows, and many of our woodlands are the result of human interference, sometimes by the deliberate action of enthusiastic pioneers of bio-aesthetic planning like John Evelyn, and sometimes as relics of past cultivation". Similarly, the wonderful landscape gardens of Japan are the result of the toil of generations.

Broadly speaking, however, man's battle with nature and environment has been haphazard and there has been no conscious planning and direction of his efforts. The explanation is simple. Individuals who set about consciously changing and planning their environment are rare. On the other hand, the large majority of people are

content with their mode of living and their everyday environment. Moreover, it is rarely that the odd individuals who change things are in a position of power wherefrom they can execute their plans. This is more true of India than of any other country in the world. Excepting the wonderful terraced gardens and planted grand avenues of *chenar* (*Platanus orientalis*) along the banks of the Jhelum in Kashmir, the work of the Moghuls who, coming from the arid regions of Central Asia, were greatly garden conscious—our country has been practically untouched by bio-aesthetic planning. May be our comparative neglect of gardening is due to the luxuriant jungle vegetation which surrounds our villages. But, now, this should be a help rather than a hindrance in the planned planting of flowering trees.

TOWN PLANNING A PRE-CONDITION

Town planning and bio-aesthetic planning should go hand in hand. Orderly and planned planting of ornamental trees can be seen at its best in new towns with wide roads, flanked by shady foot-paths, well laid-out public parks and squares, rather than in congested old towns with narrow, crooked streets. Our old towns offer little scope for bio-aesthetic planting. Firstly, they contain no open places suitable for plantation, and secondly, their streets and roads are too narrow. Planting of flowering trees in an old town appears like draping an old, haggard and ugly woman in a brilliantly-coloured new sari, which merely throws her ugliness into greater contrast. Beautiful new clothes are displayed to their best advantage on a good-looking young woman, and bio-aesthetic planting, too, can be seen at its best in new residential quarters which are growing up on the outskirts of old towns.

Town planning is a pre-condition for bio-aesthetic planting. We have allowed our towns to develop like mushrooms on a dung-heap without any plan or order. Ugly, ill-ventilated houses joined together in monstrous piles along narrow, crooked lanes—that is how our ancient towns like Amritsar, Lucknow and Banaras appear to an outsider whose eyes are accustomed to western orderliness. An aerial view reveals them as pieces of a jigsaw puzzle, mixed up in a crazy pile—and not a patch of green in these prison-like piles of masonry! These houses may have been suitable in the insecure times of the middle ages, when security rather than ventilation was the guiding principle in our domestic architecture, but in the present social context they appear anachronisms and fossils of a social and economic order which disappeared long ago. In these old towns, we see a reflection of our disorderly and indisciplined social and economic life. They may appear romantic to foreigners who come to our country in search of oriental mysticism and magic, but are

certainly unfit for the healthy growth of a nation. It is time we realized that we have had enough of these stinking streets. The younger generation must be educated in a new mode of living. We must improve the environment in our towns.

A very pertinent question arises. What should be done with these ancient insanitary slums? Some would recommend wholesale demolition. But that is an extreme view, idealistic rather than practical. We should try to improve them as far as practicable. These old towns are in need of drastic surgery. We must de-congest old residential areas by compulsory acquisition of suitable central housing areas; after demolishing the ugly houses thus acquired, we should develop parks and open spaces in the sites thus vacated. Improvement Trusts have done useful work in Kanpur, Lucknow and Delhi, but the pace of progress is snail-like and painfully slow, considering the rapid urbanization and the alarming increase in the population of our cities. In the parks thus made, swimming pools should be constructed for the recreation of citizens in hot weather, and incidentally, for irrigating the trees and lawns.

GARDEN SUBURBS

The garden suburb should be our ideal in this warm country, for vertical development is unsuitable, considering the summer heat; and flats are positively uncomfortable in summer. Moreover, the development of motor transport has greatly facilitated horizontal and peripheral development of towns. As far as possible, the growth of these garden suburbia should be planned in a concentric manner, as this will mean economy in fuel consumption for motor vehicles. With the evisceration of slummy quarters, development of parks and tanks in the de-congested areas and controlled development in the suburban areas, we can make our old towns also fairly attractive.

Towns developing along the lines of communications serve as production or distribution centres. Our old towns developed along the banks of rivers which were the main channels of communication in the past and served as distribution centres where the villagers exchanged their agricultural produce with hand-made articles manufactured by the artisans of towns. These towns were built around forts in which the kings lived surrounded by their nobles and soldiers. They were surrounded by stone or brick walls for the sake of protection. The ancient, walled towns packed with buildings raised without much of planning appeared like disorderly piles. The narrow streets were designed for the needs of pedestrians, pack-animals like mules and donkeys, and country bullock-carts, whose speed may be taken as three miles per hour. With the increase in population and changes in the technique of warfare as well as transport, the walled city

became an anachronism. The ancient town packed with buildings and people ultimately bursts, and garden suburbia in the shape of so-called civil stations and model towns are created.

So the problem arises : what should be our ideal in this new town development ? The Garden City should be our ideal. The Welwyn Garden City in England and Chandigarh in the Punjab provide examples which may profitably be followed in the development of new population centres.

With electrification which will come in the wake of the hydro-electric schemes, trolley-buses will be the most suitable for transporting people to their places of work from their homes in garden suburbs. For our city of the future, the Le Corbusier model with many-storeyed offices and factories linked with the garden suburbs by means of bio-aesthetically planted roads will be very suitable. People will work in the production hub of the city during the day and will disperse again in the garden suburbs in the evening, enjoying themselves in healthy quiet surroundings free from noise, dust and smoke.

PLACES SUSCEPTIBLE OF BIO-AESTHETIC PLANNING

IN bio-aesthetic planning, priority should be given to public places, which belong to the community as a whole rather than to individuals. A larger number of persons, especially those who cannot afford gardens of their own, will thus be able to enjoy the sight of beautiful flowers. Public parks and squares, public roads, platforms of railway stations, compounds of the hospitals, universities, colleges and schools, ancient historical buildings under the supervision of the Archaeological Department, compounds of courts, office buildings of Municipalities and District Boards and dak budgalows of the Public Works Department, the Canal Department and the District Boards are the places in towns which are susceptible of bio-aesthetic planning; they should claim preference in our programme of beautifying our towns and cities. Proprietors of hotels and banks and owners of new bungalows should also be encouraged and given all assistance in the planting of ornamental trees.

BEAUTIFYING RAILWAY STATIONS

A railway station is the gate of entry of a town. An outsider coming to a town for the first time, receives his first impression of the place from the railway station. An unfavourable first impression requires a good deal of correction later on. A traveller on a long journey forms his opinion about a town, which he is too busy to see, from the architecture of the railway station and the appearance of its platforms. He may condemn a town merely because he passed through a ghastly railway station. A railway station with a grim exterior will be unworthy of any beautiful town. Platforms can also be sometimes frightfully drab. Avenues of *amaltas*, Persian lilac, *peltophorum* and *lagerstroemias* will give them a touch of colour, relieving them of their monotony. A platform without trees will add to the discomfiture of passengers who often have to wait for long on it for their trains. Shade is always welcome in summer. The necessity of planting the platforms and approaches of railway stations with beautiful flowering trees is yet to be fully appreciated. We have still to plan the planting of platforms of thousands of railway stations.

There is another reason why we should make the platforms of our railway stations gay with flowering trees. Few go to gardens to acquaint themselves with flowering tree, but millions of persons daily pass through railway stations in the course of business; they notice

the railway platforms more than any other public place. By planting flowering trees on platforms of stations, we will not only be beautifying them, but will also be educating the citizen in bio-aesthetics. The railway will thus be making a genuine contribution to the cultural life of the country. The Indian Railways should grow their own nurseries for supply of seedlings to station-masters for planting on platforms. It is necessary, however, that the station-masters develop a sense of appreciation for flowers and trees. This they will if they are given lectures on bio-aesthetics in the course of their training.

We are living in a shrinking world. India is no longer an isolated country. The aeroplane has annihilated distance, and the size of the earth has shrunk to a fifteenth of what it was before the Second World War in terms of the time dimension. This has resulted in greater contacts among the peoples of different countries, and a tremendous increase in tourist traffic in India. So far, we have been having cold-weather tourists only from Europe and America, but in future we will have tourists from all parts of the world in the spring and summer and autumn months, too, when the Himalayas are at their best and most of our ornamental flowering trees are in bloom. Moreover, electric fans, air-conditioned railway trains, motor buses, houses and hotels have alleviated the discomfort of living in a hot country to a great extent, and the plains of India will no longer remain unbearably hot and uncomfortable as at present. The Himalayan meadows carpeted with brilliant alpine flowers, the snow-covered peaks of the Himalayas with their pine-scented forests and the brilliantly-coloured rocky trans-Himalayas will draw lovers of natural beauty like a magnet from all parts of the world. What will they see in the plains on their way to the Himalayas? If we make the land colourful by planned planting of flowering trees, the visitors will carry back happier impressions. Just as the Japanese invite foreigners when cherries blossom in their country, we can also call them when the baubineas are covered with a mantle of purple and mauve flowers in the month of March, and when our roads become a blaze of colour with flowers of *gul mohur*, *amaltas* and *peltophorum* in the month of May.

Gate-keepers who live in neat little houses along the railway lines near the gates at railway and road crossings should also be asked to plant a couple of flowering trees near their houses. How beautiful these places will appear! Not only railway passengers but people passing through these places in cars and other conveyances will also be able to feast their eyes on the beauty of the blossoms of the pink cassias, *kachnars*, *amaltases* and *lagerstroemias*. Those who have to wait at railway crossings when the gates are closed, will have some-

thing more beautiful to contemplate than the railway signals and the complaint book.

Ancient buildings and ruins under the supervision of the Archaeological Department afford endless opportunities for bio-aesthetic planting. Those who are in charge of this Department have already shown imagination and foresight in this type of work. The deer park in Akbar's tomb at Sikandra in Agra district is an instance. However, the planting of flowering trees needs be pushed on further. The bare hills around Fatehpur Sikri should be planted with *amaltas*, which is highly drought-resistant, with the additional advantage of not being eaten by goats. Besides *amaltas*, *dhak*, *erythrina*, *barna*, yellow silk cotton tree and *semal* may also be planted in pure formations on different hillocks. Hills swathed in the yellow, deep yellow, scarlet, and red colours of the flowers of these trees will look fascinating from the Hawa Mahal. The ruins and temples at Sarnath, near Banaras, the Taj Mahal, Itmad-ud-Daulah, Akbar's Tomb at Sikandra, the ancient temples at Bateshwar in Agra district, the Purana Qila, Qutab Minar and Hamayun's Tomb at Delhi, Ajanta and Ellora in Maharashtra, temples in South India and the Mandu Fort in Madhya Pradesh all provide scope for planned planting of ornamental flowering trees.

ALONG BANKS OF RIVERS AND CANALS

Towns which have canals and small rivers are particularly suited to bio-aesthetic planting. The banks of the canal at Kanpur and the bank of the Gomti river at Lucknow should be planted with *Lagerstroemia flos-reginae*, *L. thorelli* and other moisture-loving trees. It would be desirable to encourage canal irrigation in other towns as well, as an incentive for the growing of gardens and also for planned planting of ornamental trees. Headworks of canals can also be developed into pleasure resorts, with a little effort.

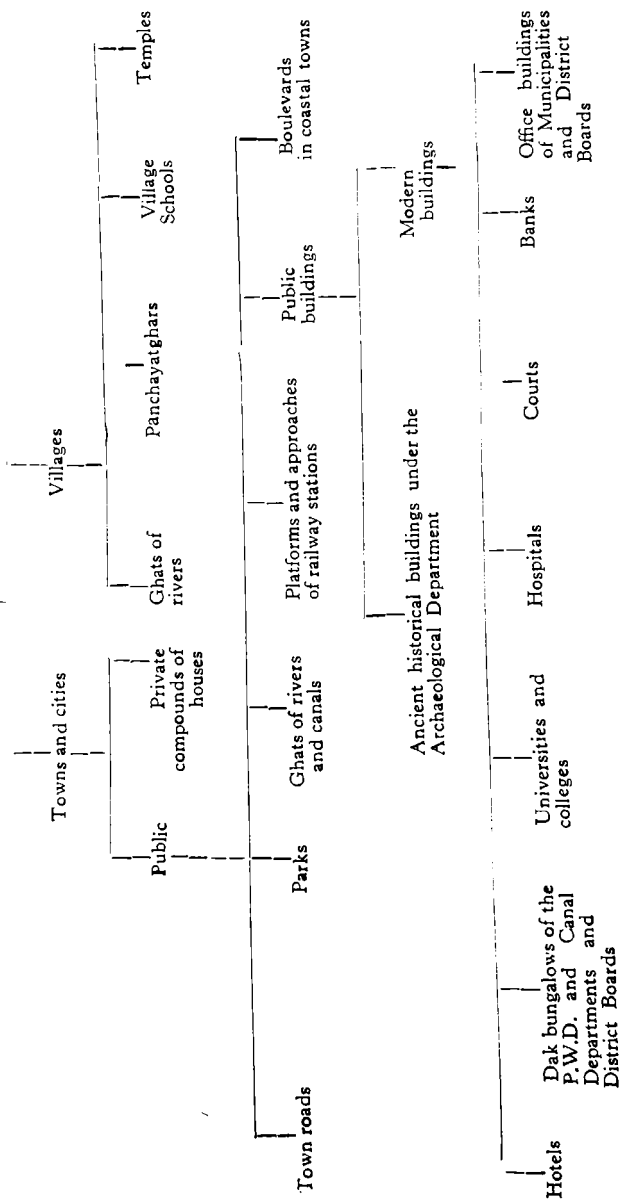
In India, rivers like the Ganges and the Jumna are regarded as particularly sacred, and along their banks we see scores of temples and ghats. Such temples and ghats may be planted with *kadam* and *asoka* the sacred trees of Krishna and Sita. Avenues of *asoka* and *kadam* at Hardwar and Banaras will not only enhance the sanctity of the ghats but will also add colour and charm to these places.

Hotels and dak bungalows which are usually fenced and have well-protected compounds, some having irrigation facilities as well, come within the scope of the tree-planting programme. The boulevards of coastal towns like Bombay and Madras can be made a symphony of colour by planned planting of suitable flowering trees.

Nor should we neglect the villages; village schools, *panchayatghars* and temples can be planted with ornamental trees. In the Punjab,

the villagers plant *bakain* (Persian lilac) around the bullock-runs of wells fitted with Persian wheels. These clumps not only provide shade for bullocks and men, but also appear very beautiful in March when they are covered with sweet-scented, lilac-coloured flowers. Village community houses (*panchayatghars*) which are jointly owned by the village and are usually under the supervision of rural development organizers and *panches* (the elected representatives of the village), provide ample scope for planting of ornamental trees. Small nurseries of flowering trees can be raised in the compounds of the village schools and *panchayatghars*, and can serve as foci of tree-planting activities.

Places Susceptible of Bio-aesthetic Planning



AVENUES FOR TOWN ROADS

IN India, we have the largest number of flowering trees in the world, indigenous as well as exotic, which can be utilized for beautifying our towns. On account of the diversity of climate and soil, we can grow almost any tree from the temperate rhododendrons and double-flowering cherries to the tropical amherstias and brownneas. But, barring a few cities like New Delhi, Lucknow, Patna, Chandigarh and Bangalore, we have made little use of the tree-material available in our country.

Even in countries in the temperate zone, where modern western civilization has made comparatively greater progress, it is only recently that attention has been drawn to the use of trees for beautifying towns. Except in France and Italy, where Lombardy poplars are extensively grown, we find little beauty in the town roads of Europe. With the intensive house-building activity which followed World War I, people in England awakened to the necessity of planting their town roads with beautiful trees. The outer streets of Birmingham show careful planning with liberal use of trees and grass. In Liverpool, grass is grown even between tram-lines with flanking hedges.

The French immigrants introduced the Lombardy poplar in Canada, and it is commonly grown as a roadside tree in the cities of Quebec and Montreal. Maple, which is the national tree of Canada, as oak is of Germany, is extensively grown as a roadside tree in Canada and the eastern U. S. A. Of all the cities in the temperate regions, the city of Washington is, perhaps, the most aesthetically planted. The amber, yellow and coppery tints of maples, oaks and chestnuts in the Rock Creek, harmonizing with the yellow colour of buildings in the autumn months of October and November, leave an indelible impression on one's mind. Japanese double-fragrant magnolias lend grace to the state buildings and monuments of this beautiful American city.

However, as compared with tropical and sub-tropical countries, the tree-material available to the inhabitants of temperate countries is comparatively prosaic. Trees with brilliant flowers and birds with gay plumage occur only in the tropics and sub-tropics. Temperate countries of Europe and America have hardly anything to match the blazing *gul mohur* avenues of Kandy, the brilliant blue jacaranda avenues of Johannesburg and the graceful palm avenues of North African towns.

Considerable attention has been paid to the layout of avenues in Cairo. Along the long road leading from Gizeh to the pyramids, we find a beautiful avenue of alternating *gul mohur* and Eucalyptus. Jacarandas are planted extensively along roadsides, and also date-palms mixed with clipped box like trees. Clumps of date-palms are grown in the back-yards of houses. In Morocco, the French colonials have planned the roadside avenues of their towns in an artistic manner. In the main thoroughfare of Rabat, a dwarf variety of date-palm is grown in avenues with grass and beds of annuals along the sides. Triangular plots in the town are planted with Persian lilac and *Schinus terebenthifolius* which bears red berries in profusion in the month of November. The compounds of private houses are enlivened by orange flowers of *Bignonia venusta*, magenta-coloured bougainvilleas, and bright-blue shrubs of *Plumbago capensis*.

The broad aims of town planning are to make the towns more efficient, more healthy and more beautiful. For making them healthy and beautiful, we require not only spacious, well-planned streets designed as a unit, but, also well-planned roads and parks with a planned plantation of ornamental trees. What is desired is *order*, not uniformity. Dead uniformity with the same stamp placed on all the houses and trees in the whole town will be as undesirable as the present confusion, with everyone following his own sweet will and spreading ugliness. What is desired is an orderly variety with not only houses in a street following a particular design, but also trees planted and replaced from time to time according to a plan.

PLANTATION PLAN

For our towns, we not only need a "Road Plan" for traffic but also a "Plantation Plan". For every town of importance a "Plantation Plan" should be drawn up and rigidly adhered to. For new roads, it is comparatively easy to plan a plantation of unfamiliar flowering trees, but it is the old roads which present a problem. The wholesale cutting of existing trees will render them shadeless. Hence, the only practical approach is replacement of dead, decaying and old trees according to a plan, and removal of young trees planted within two to three years. Once a plan is made, it should be rigidly followed, not only in new plantations but also in replacements. Some imaginative person planned beautiful avenues of flowering trees for the Banaras Hindu University; these have disappeared or have become patchy on account of the absence of a plantation plan and lack of aesthetic taste in those who later on managed them. Everyone cannot appreciate colour and beauty. While we call to our aid painters and artists for furnishing and decorating our houses, we should also take the help of aesthetically gifted arboriculturists.

Arboriculturists who have an eye for colour and beauty should be selected and given training in art schools in garden designing and theories of colour harmony and colour contrast. The artist should be introduced to the garden, and the arboriculturist should be initiated into the secrets of the art school. Both will be gainers from the experience. While the fresh breeze of the garden and the glamour of erythras, colvilleas and *amaltas* will invade the studio, freshening up the minds of the artists, the garden will also gain from the impact of imaginative and sensitive minds, who will be able to convey their experience to the common man in the form of beautiful pictures. Thus, the blaze of *gul mohurs*, the glory of colvilleas and the splendour of *kachnars* will brighten up our homes throughout the year, even when other flowers are dead and gone. On the other hand, we will be spared the pitiable spectacle of arboriculturists who plant *pipal* and *shisham* trees on our roads in the towns.

CRITERIA FOR SELECTION OF TREES

While shade and economic utility should be the criteria for selecting trees for national, state and district roads passing through the country, different types of trees are required for town roads. *For roadside avenues in towns and cities shade and beauty are the sole criteria* which we should consider while selecting trees. Unfortunately, as the large majority of our flowering trees are deciduous, there are very few trees which combine shade with beauty of flowers. Where the space available is limited and only one row of trees can be grown on each side of the road, flowering trees like *gul mohur*, *amaltas*, jacarande, erythrina and spathodea may be grown alternating with shade trees like *Eugenia operculata*. The choice should be restricted to a single species for each street. Very tall trees like Eucalyptus and millingtonia and trees with spreading crowns like banyan are unsuitable for town roads, because they interfere with electric wires. Medium-sized trees like *Eugenia operculata*, and *pakur* (*Ficus infectoria*), which are extensively grown in New Delhi, are ideal for shade, while for beauty we have a large number of trees to choose from.

Double avenues of trees are a necessity in big cities where wide roads are available. In an ideal road for a traffic centre of the metropolis, provision should be made for fast-moving traffic such as motor cars and lorries and slow-moving traffic such as horse-drawn vehicles, bullock-carts and bicycles. A road divided into four sections for slow and fast traffic on each side, separated by islands planted with grass and shrubs in the middle and flanked by footpaths for pedestrians should be our ideal. *I recommend double avenues of trees on the outer sides of the footpaths; an outer row of shade trees and an inner row of ornamental flowering trees.* The outer row should be composed of evergreen shade

trees with dense foliage such as tamarind, *Polyalthia longifolia*, *Eugenia operculata*, *Putranjiva roxburghii*, moulisari (*Mimusops elengi*), *Ficus retusa*, neem (*Melia azedarach*) and pakur. The function of the outer row is of shade only. The trees should be planted in pure avenues and not in mixed patches. Growth in pure avenues provides a beautiful skyline and a pleasing effect due to the uniform size and shape of the crowns of the trees of the same species, while a mixture creates an ugly confusion with a jagged skyline. The inner rows should be of ornamental flowering trees only. The outer rows of shade trees will provide shade for pedestrians on the footpaths, and at the same time will furnish a green background for the pink, red, crimson and yellow flowers of the flowering trees. The trees in both the rows should be planted at a distance of 30 feet from each other with the trees in opposite rows alternating.

In modern towns constructed in the form of blocks, numbering of streets is desirable, as it is the easiest guide for a newcomer. In old towns, we usually find the roads and streets named after historical personages, officials, and lately after municipal commissioners who regard the naming of roads after them as the royal road to fame and immortality. The result has been encrusting of the road crossings with clumsy signboards, particularly when the seeker after cheap popularity insists upon retaining all customary titles. This involves waste of time and energy in correspondence, and those who have to send telegrams should be justified in sending a bill to the immortality-hunting gentry who, while perpetuating their own memory, cause so much of inconvenience to others.

NAMING ROADS AFTER TREES

Bio-aesthetic planning will also simplify the problem of naming roads and streets. Streets can be named after the flowering trees which are grown on the road, such as Amaltas Avenue, Kachnar Avenue, Gulmohar Avenue and Asoka Avenue. Not only will the roads be readily recognizable, but this device will also enable the citizens to familiarize themselves with our common flowering trees. Some imaginative pioneer has actually named a road in Lucknow as Millingtonia Avenue after *Millingtonia hortensis*.

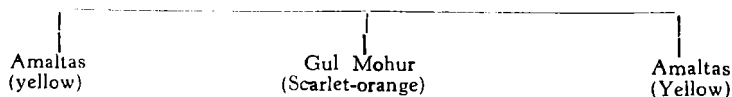
In every big town, we find triangular pieces of land at the junction of roads. To safeguard against traffic accidents, these plots are not leased for building purposes. There are many such triangular plots in the Civil Lines of Allahabad. At present, they are lying neglected, covered with ugly, wild-growing jungle trees. How beautiful they can be, particularly the sunken ones, if planted with flowering trees. Trees of only one species should be planted in each triangle. Covered with *spathodeas*, *largerstroemias*, *jacarandas*

and *kachnars*, these triangular plots will appear very beautiful, serving as model points of beauty, affording a welcome shade to pedestrians and a refuge for young lovers.

Beautiful roads and well-planned parks and squares will bring the beauty of nature within the reach of the common man in our towns and cities. The dwellers of slums will also appreciate the beauty and splendour of flowering trees—or at least their children will, who will have the opportunity of growing up in a new environment. Those who have lived in filthy surroundings for generations cannot be suddenly transformed, in a few years, into lovers of beauty. But the attempt is certainly worth making and the results will be tangible after some time.

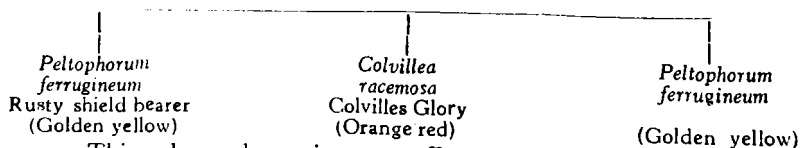
While most of the flowering trees look beautiful when planted in pure avenues, there are some species which flower at the same time ; the colours of their flowers also harmonize, and hence they appear more effective when planted side by side. Some of the flowering trees which flower in the same season are grouped below in schemes with due regard to colour harmony and are recommended for planting along our town roads.

SCHEME No. 1



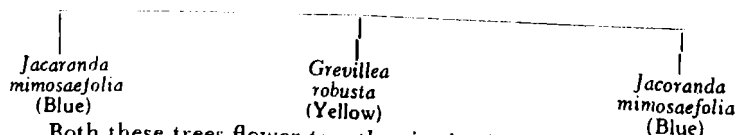
This is a very striking colour scheme, the rich yellow colour of *amaltas* flowers contrasting with the scarlet-orange colour of *gul mohur* flowers in the month of May when both the trees are flowering.

SCHEME No. 2



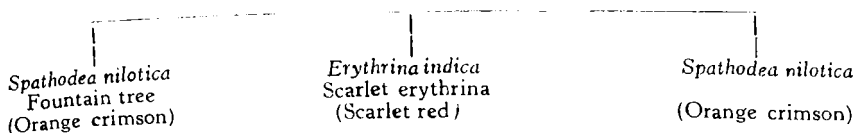
This colour scheme is very effective in October when both these trees are flowering, and a colour effect similar to that in scheme No. 1 is produced.

SCHEME No. 3



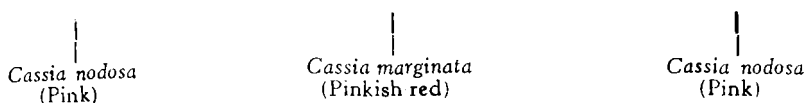
Both these trees flower together in April and a beautiful colour effect, which is soothing in the glare of the April sunshine, is produced.

SCHEME No. 4



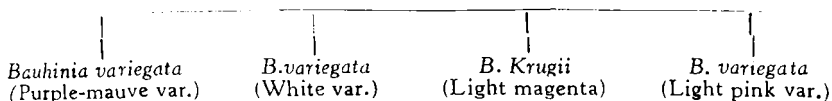
Both these trees flower in March and they are a blaze of colour.

SCHEME No. 5



Both these trees flower in May and June when a very mellow colour scheme of pink and red is obtained.

SCHEME No. 6 (Bauhinia Scheme)



This colour scheme which is composed of three varieties of *Bauhinia variegata*, pink, white and purple-mauve, and light magenta (*B. Krugii*) is recommended for dust-free roads of residential areas. All these bauhinias blossom in a leafless condition from the middle of February to the middle of March when they look like huge bouquets of pink, white, purple and light magenta flowers. This is a very pleasing colour scheme and is highly recommended.

ORNAMENTAL TREES SUITABLE FOR TOWN ROADS

Foliage trees for outer avenue	Flowering trees for inner avenue
<i>Averrhoa carambola</i>	<i>Cassia fistula</i>
<i>Callistemon lanceolatus</i>	<i>Bauhinia purpurea</i> ; <i>B. variegata</i>
<i>Anthocephalus cadamba</i>	<i>Colvillea racemosa</i>
<i>Eugenia operculata</i>	<i>Peltophorum ferrugineum</i>
<i>Polyalthia longifolia</i>	<i>Spathodea nilotica</i>
<i>Putranjiva roxburghii</i>	<i>Jacaranda mimosaeifolia</i>
<i>Sterculia alata</i>	<i>Poinciana regia</i>
<i>Pithecolobium saman</i>	<i>Lagerstroemia flos-reginae</i>
<i>Melia azadirachta</i>	<i>Grevillea robusta</i>
<i>Tamarindus indica</i>	<i>Gliricidia maculata</i>

LIST OF NURSERIES

KERALA

1. Ottos orchards and nurseries, Pattikad, Trichur
2. Agri-Horticultural Society, Trivandrum
3. Agricultural Research Station, Ollukara

MADRAS

4. Chettiar Garden, Shri K.M. Narayanan Chetty, Oppathanadi, Krishnagiri taluk, Salem
5. S. K. Abdul Razeck, Salem Nursery, Cherry Road, Salem
6. Shri Ponnusamy S., S/o Sri Palanisamy, Simmasamipuri Extension, Salem
7. Sahjohan Sahib, Nurserymen, Omalur, Salem District
8. T.V. Sundaram Iyengar & Sons (P) Ltd., Eruvadi Farm, Eruvadi P.O., Nanguneri taluk, Tirunelveli District.
9. M. Karupaiah Nadar, Koodavoil, Aruppakottai Road, Madurai District.
10. Soundarya Nursery, Teynampet, Madras
11. Raja Farm Nursery, No. 2, Singaravelu Street, T. Nagar, Madras
12. Ganesh Nursery, Venkatanarayana Road, T. Nagar, Madras
13. Ayyar's Farm, Kothirumanikuppam, Sathamedu Post, Chingleput District
14. Agri-Horticultural Society, Teynampet, Madras
15. V. Kannaiyer, Nurserymen, Pillaiar Koil Street, Extension, Tirupattur—North Arcot District
16. Dhanakodi Nadar, Private Orchard, Virudhunagar, Ramanathapuram District
17. Krishnaswamy, Raja Nursery, Rajapalayam, Ramanathapuram District
18. State Nursery, Sembanarkoil, Mayavaram taluk, Tanjore District
19. S.K. Sahib Rowther, Madhurai Nursery, Garden, Edward Hall Road, Madurai, Madurai District
20. Sakkarai Sahib, Nagalanagar, Dindigul, Madurai District
21. G. Appaswamy, Chinnavaguppa Dharmapuram Road, Aranthanel Nursery Garden, Mayavaram Post, Tanjore District
22. Kuppuswamy Udayar, Keela Udayar Street, Dharamapuram Road, Tanjore District
23. Vasantha Vilas Nursery, (Proprietor Velu Nair), Thiruk.

- kadaiyur Post, Mayavarum taluk, Tanjore District
24. Beemaraja Parsad, Nurseryman, Extension, Tirupathur, North Arcot District
 25. J. Rajaram, Nurseryman, Poohampatti Post, Salem District
 26. Rampriar, Nurseryman and Gardener, Tirupathur, North Arcot District
 27. Kaliaperumal Nursery, Proprietor S. Govindaswamy, Thirukkadaiyur, Post, Mayavaram Taluk, Tanjore District
 28. Government Botanical Gardens, Ootacamund, Nilgiris
 29. Sim's Park, Coonoor, Nilgiris
 30. Botanical Gardens, Agricultural College and Research Institute, Coimbatore-3
 31. Salem Nursery Gardens, Cherry Road, Salem
 32. The Bellary Onion Seed, Dept., Pollachi
 33. J.G. Fortschi and Company, United Nilgiris Horticultural Nurseries, Coonoor, Nilgiris
 34. Sivalingam, Upper Coonoor
 35. Joseph, Near Head Post Office, Coonoor

ANDHRA PRADESH

36. Kasim Nursery, Putli Bowli, Hyderabad - A.P.
37. Narain Nursery, Ramkote, Hyderabad
38. Balaram Nursery, Bogulkunta, Hyderabad
39. Isa and Sons, Putli Bowli, Hyderabad
40. Deccan Seeds Stores, Bashir Bagh, Hyderabad
41. Pioneer Horticultural Nursery, Kacheguda, Hyderabad
42. P. V. Madhava Rao & Bros., Nursery, Panyam P.O., Kurnool
43. M/s. Surya Nursery, Kadium P.O., East Godavari
44. M/s. Rao Chinna Nursery, Kadium P.O., E. Godavari
45. M/s. Nani Nursery, Kadium P.O., E. Godavari
46. M/s. Durga Nursery, Governorpet, Vijayawada
47. Agri-Horticultural Society of Hyderabad, Office of the Govt. Horticulturists, Horticulturist, Hyderguda, Hyderabad.

MAHARASHTRA

48. "Shobha Farms," Bhabdarker Institute Road, Deccan Gymkhana, Poona-4
49. Superintendent, Victoria Gardens, Byculla, Bombay
50. Superintendent, Poona Municipal Corporation Gardens, Poona-2
51. Superintendent, Parks and Gardens, No. 14, Queens Barracks, Bombay-1
52. M/s. P.P. Pocha & Sons, 8, Napier Road, Poona-1
53. M/s. N. Cooper's & Co., Queen's Garden, Poona-1

54. M s. Palekar and Sons, Sitaram Buildings, Near Crawford Market, Bombay

BIHAR

55. Luna Nursery, P.O. R S Galudih (Singbhum)
 59. D.V.C. Nursery, Hazaribagh
 57. Royal Nursery, Patna
 58. Patna Nursery, New Market, Patna
 59. Prakash Nursery, Hajipur.
 60. Raghunandan Sah & Sons, Gobindpur, Muzaffarpur
 61. Dala Dali Farm, P.O. Deoghar, Santhal Parganas
 62. R. Chatterjee, Dharbhanga, P.O.
 63. Hind Nursery, P.O. Santhal Parganas
 64. Shanker Nursery, P.O. Deoghar, Santhal Parganas
 65. P. Bhattacharya, "Bawan Bigha" Deoghar, Santhal Parganas
 66. Wasi Khan, Chhawani, P.O. Bettiah
 67. Chandra Floral Farms, Ulao, P.O. Begusarai, Monghyr
 68. Glory Garden, At & P.O. Mihijam (S.P.)
 69. Ram Charan Mahto, Khiddi, P.O. Rajaun, Baunsi (Bhagalpur)
 70. New Nursery, Jagidih, P.O. & R/S (S.P.)
 71. Yokhi Ram Marwari, "Sunderban" Bhagalpur
 72. Narayan Agri-Horticultural Syndicate, Bishunpur, P.O. Begusarai, Monghyr
 73. Shah Chandra Singh, P.O. Nath Nagar, Bhagalpur

WEST BENGAL

74. M/s. Globe Nursery, 25 Ramdhone Mitter Lane, Shyambazar, Calcutta-4.
 75. M/s. Imperial Nursery, 8/1, Raicharan Pal Lane, P.O. Entally, Calcutta-17
 76. M s. Model Nursery, 5/1, Tiljala Road Calcutta-17
 77. M s Sutton & Sons, 13-D, Russell Street, Calcutta
 78. The Esplanade Stores, 7, Esplanade East, Calcutta-1
 79. The Edward Nursery, Andul Road, P.O. Botanic Garden, Horrah
 80. The Golden Nursery, 23, Dakshin Baxarah Lane, P.O. Botanic Garden, Howrah
 81. M/s. Nelico Seeds Stores, Seedmen & Nurserymen, Jhargam, District Midnapore.
 82. The Royal Agri-Horticultural Society of India, 1, Alipore Road, Calcutta-27.
 83. M. s. G. Ghosh & Co., Town-end, Darjeeling, Darjeeling
 84. The Standard Nursery (Regd.), P.O. Kalimpong, District

Darjeeling

85. M/s. Indian Horticultural Co., P.O. Kalimpong, District Darjeeling.
86. Indian Botanic Garden, P.O. Botanic Garden, Sibpore, Howrah
87. M/s. Sarat Nursery, Howrah

ORISSA

88. M/s. Cuttack Nursery, Cuttack
89. M/s. Rajani Nursery, Cuttack

PUNJAB

90. Government Flower Nursery, Patiala
91. Government Nursery, Panjore
92. Government Nursery, Chail

ASSAM

93. M/s. M. Khan & Sons, P.O. Dhubri, District Gopalpara
94. Gauhati Nursery, Fancy Bazar, Gauhati, District Kamrup

DELHI

95. Sunder Nursery, Nizamuddin, New Delhi
96. Joginder Nursery, New Delhi
97. Rajoria Nursery, Nursery Garden, Delhi
98. Jogdish Nursery, Roshanara Garden, Delhi.

JAMMU & KASHMIR

99. Flower Breeding Nursery, Lalmandi, Srinagar

RAJASTHAN

100. Garden Nurseries, Jaipur
101. Garden Nurseries, Udaipur
102. Garden Nurseries, Kota
103. Garden Nurseries, Alwar



The Asoka

White Bauhinea



W. B. B. B.